1. Title of the Project

IntelliRead: Secure AI-Based Online Book Reading Platform

2. Introduction / Background

With the growing demand for digital accessibility, traditional libraries face limitations such as physical access, limited copies, and fixed operating hours.
IntelliRead, an **AI-Enhanced Online Book Reading Platform**, offers a modern, intelligent, and secure solution to these limitations. It provides a centralized, web-based environment where authenticated users can read, download, and interact with books anytime, anywhere.

The platform integrates **Agentic AI** capabilities such as automatic book summarization, real-time term explanations, voice-based reading, and conversational assistance — making reading more engaging, personalized, and accessible.
It also features **multi-language support**, **content-based book recommendations**, **user behavior analysis**, and an **admin-controlled content management system**, ensuring both data security and a rich user experience.

3. Objectives

- Integrate **Agentic AI** capabilities for book summarization, chapter highlights, and real-time explanations of complex terms.
- Develop an **AI Reading Companion** that answers queries, recommends related content, and supports voice-based interaction.
- Implement **semantic and content-based search** allowing users to find books through natural language queries.
- Provide **secure authentication and role-based access control (RBAC)**:
    - **Admin:** Manage users, books, and reviews.
    - **Publisher:** Perform CRUD (Create, Read, Update, Delete) operations on books they publish.
    - **User:** Read, download, and review books.

- Implement **AI-powered content-based recommendations** based on reading patterns, interests, and book similarities.
- Analyze **user reading behavior** to identify top-read categories and send personalized notifications when new books are added in those categories.
- Provide **multi-language reading**, **PDF downloads**, **AI-generated keyword tagging**, and **review system**.
- Enable **book suggestion submission** with user notifications once suggestions are approved or added.
- Develop an **admin dashboard** for managing books, reviews, users, publishers, and system analytics.
- Ensure a secure, scalable, and user-friendly experience that promotes continuous reading and learning.

4. Scope of the Project

Included Features:

- **AI Book Summarization** – Automatic chapter-wise and full-book summaries.
- **AI Reading Companion** – Real-time contextual help and Q&A.
- **Voice Interaction** – AI-driven text-to-speech and verbal query responses.
- **Semantic and Content-Based Book Search** – Natural language and feature-based similarity search.
- **AI Keyword Extraction & Auto-tagging.**
- **Similar Book Recommendations** – Based on content similarity and user reading history.
- **Role-Based Access Control (RBAC)**:
    - *Admin*: System management and monitoring.
    - *Publisher*: CRUD operations for their uploaded books.
    - *User*: Book reading, downloads, and reviews.
- **Secure Authentication** – JWT-based login for users, admins, and publishers.
- **Book Categorization & Advanced Filters.**
- **Online Reading & PDF Download Support.**
- **Book Reviews, Ratings, and Suggestions.**
- **Personalized Notifications** – For new books in preferred categories or user-suggested titles.

- **Reading Analytics Dashboard** – Track most-read categories and engagement levels.

5. Methodology

Frontend:
HTML, CSS, JavaScript for responsive and dynamic UI.

Backend (choose one):

- **Java + Spring Boot** for secure, modular REST API development, or
- **Node.js + Express.js** for fast, scalable API handling.

Database:
MySQL / MongoDB for storing users, books, reviews, and analytics data.

AI Integration:
OpenAI API / Hugging Face models for summarization, recommendations, and semantic search.

Voice Features:
Google Text-to-Speech (TTS) / Speech-to-Text APIs for voice-enabled reading and interaction.

Version Control:
Git / GitHub for collaborative version management.

6. Expected Outcome / Results

- A **secure, scalable, and AI-driven online reading platform** accessible via any web browser.
- **Personalized reading experiences** through AI-based summaries, recommendations, and interactive assistance.
- **Content-based book recommendations** tailored to users' interests and past reading behavior.

- **Role-based management system** ensuring proper access for admins, publishers, and users.
- **Real-time notifications** for users when new books are added in their preferred genres.
- **Advanced analytics** identifying most-read categories and user engagement trends.
- **Enhanced accessibility** with multi-language and voice-based reading features.
- **Efficient book management** through an integrated admin and publisher dashboard.

Benefits:

- Anytime, anywhere access to a vast library of books.
- Enhanced learning through AI explanations and summaries.
- Increased user engagement and knowledge retention.
- Secure, structured, and scalable architecture for long-term growth.

7. Conclusion

The **IntelliRead** platform bridges the gap between traditional reading systems and modern digital experiences.
By integrating **Agentic AI**, **content-based intelligence**, and **role-based security**, it provides a futuristic reading environment that is not only interactive but also adaptive to user preferences.
This project represents a significant step toward transforming digital reading into a **personalized, intelligent, and collaborative experience**—empowering users, publishers, and administrators alike.